WHAT IS CLAIMED IS:

1. A base station apparatus for radiocommunication network in which radiocommunication with one or more radio terminal apparatuses is established according to a frequency hopping scheme, said base station apparatus comprising:

a search section which searches for another radiocommunication network in the vicinity of said base station apparatus when said base station apparatus is started, when another radiocommunication network is detected, said search section obtaining the pattern and time of frequency hopping in said another radiocommunication network; and

a frequency hopping selection/setting section which selects the pattern obtained by said search section as the frequency hopping pattern for said base station apparatus, and which selects, on the basis of the time obtained by said search section, timing at which the frequency hopping based on the pattern does not cause frequency interference with respect to frequency hopping performed in said another radiocommunication network, and which carries out frequency hopping of said pattern at the thus-selected timing.

2. The base station apparatus for radiocommunication network according to Claim 1, further comprising a timing adjustment section which, during the course of ordinary operation, adjusts the timing of the frequency hopping of said base station apparatus relative to the frequency

hopping in said another communications network.

3. A method of controlling communication across a radiocommunication network which comprises one or more radio terminal apparatuses and a base station apparatus which establishes communication with the radio terminal apparatuses according to a frequency hopping scheme, wherein

said base station apparatus searches for another radiocommunication network in the vicinity of said base station apparatus when said base station apparatus is started; and when another radiocommunication network is detected, said base station apparatus obtains the pattern and time of frequency hopping in said radiocommunication network, selects said pattern as the frequency hopping pattern for said base station apparatus, selects, on the basis of the time obtained, timing at which the frequency hopping based on said pattern does not cause frequency interference with respect to frequency hopping in said another radiocommunication network, and executes frequency hopping of said pattern at the thus-selected timing.

4. The method of controlling communication across a radiocommunication network according to Claim 3, wherein said base station apparatus, during the course of ordinary operation, adjusts the timing of the frequency hopping of said base station apparatus relative to the frequency hopping performed in said another communications network.

5. A radiocommunication network system including a plurality of base station apparatuses which have adjacent or overlapping radio areas, and one or more radio terminal apparatuses which establish communication with any one of said base station apparatuses, wherein

each of said base station apparatuses comprises a load-condition transmission section which sends the state of load on each base station apparatus to said radio terminal apparatus in the form of a probe response signal when receiving a probe signal from said radio terminal apparatus; and

said radio terminal apparatus comprises:

a throughput storage section which stores previously-imparted necessary throughput as information;

a probe signal transmission section which sends a probe signal to search for a base station apparatus in the vicinity of said radio terminal apparatus; and

a base station apparatus selection section which selects a base station apparatus whose load state is optimum on the basis of a load-state signal having been sent back from said base station apparatus in response to the probe signal transmitted from said probe signal transmission section as well as on the basis of the throughput stored in said throughput storage section, and which connects the thus-selected base station apparatus to said radio terminal apparatus.

6. The radiocommunication network system according to Claim 5, wherein if the state of load on said base station apparatus connected to said radio terminal apparatus has changed to an unsuitable throughput state stored in said throughput storage section, said base station selection section selects another base station apparatus whose load state is optimum on the basis of the load-state signal sent back from said base station apparatus in response to the probe signal transmitted from said probe signal transmission section as well as on the basis of the throughput stored in said throughput storage section, and connects the thus-selected base station apparatus to said radio terminal apparatus.

7. A radio terminal apparatus which establishes communication with any one of a plurality of base station apparatuses which have adjacent or overlapping radio areas, said radio terminal apparatus comprising:

a throughput storage section which stores previously-imparted necessary throughput as information;

a probe signal transmission section which sends a probe signal to search for a base station apparatus in the vicinity of said radio terminal apparatus; and

a base station apparatus selection section which selects a base station apparatus whose load state is optimum on the basis of a load-state signal having been sent back

from said base station apparatus in response to the probe signal transmitted from said probe signal transmission section as well as on the basis of the throughput stored in said throughput storage section, and which connects the thus-selected base station apparatus to said radio terminal apparatus.

8. The radio terminal apparatus according to Claim 7, wherein if the state of load on said base station apparatus connected to said radio terminal apparatus has changed to an unsuitable throughput state stored in said throughput storage section, said base station selection section selects another base station apparatus whose load state is optimum on the basis of the load-state signal sent back from said base station apparatus in response to the probe signal transmitted from said probe signal transmission section as well as on the basis of the throughput stored in said throughput storage section, and connects the thus-selected base station apparatus to said radio terminal apparatus.

9. A method of controlling communication across a radiocommunication network which comprises a plurality of base station apparatuses which have adjacent or overlapping radio areas, and one or more radio terminal apparatuses which establish communication with any one of said base station apparatuses, the method comprising the steps of:

previously imparting necessary throughput to said

radio terminal apparatus;

sending a probe signal from said radio terminal apparatus in order to search for a base station apparatus in the vicinity of said radio terminal apparatus;

sending the state of load to said radio terminal apparatus from said base station apparatus that received the probe signal; and

selecting said base station apparatus whose load state is optimum on the basis of a load-state signal having been sent back from said base station apparatus as well as on the basis of the throughput previously imparted to said radio terminal apparatus, and connecting the thus-selected base station apparatus to said radio terminal apparatus.

10. The method of controlling communication across a radiocommunication network according to Claim 9, wherein if the state of load on said base station apparatus connected to said radio terminal apparatus has changed to a previously-imparted undesirable throughput state, said radio terminal apparatus sends a probe signal to a base station apparatus in the vicinity of said radio terminal apparatus, and another station apparatus whose load state is optimum is selected on the basis of the load-state signal sent back from said base station apparatus in response to the probe signal as well as on the basis of the throughput and connected to said radio terminal apparatus.

11. A base station apparatus for a radiocommunication network which establishes radio communication with one or more radio terminal apparatuses, said base station apparatus comprising:

a load state detection section for detecting the state of load on a radiocommunication network during the course of exchange of data between said base station apparatus and said radio terminal apparatus; and

a modification section which dynamically changes the maximum back-off time for preventing collision between data, in accordance with the state of load detected by said load state detection section.

12. A base station apparatus for a radiocommunication network which establishes radio communication with one or more radio terminal apparatuses, said base station apparatus comprising:

a load state detection section for detecting the state of load on a radiocommunication network during the course of exchange of data between said base station apparatus and said radio terminal apparatus; and

a modification section which determines whether to add a control frame when a frame of data is transmitted, in order to ensure a period during which a transmission path is occupied, in accordance with the state of load detected by said load state detection section, and which dynamically modifies the state of addition of the control frame.

13. A base station apparatus for a radiocommunication network which establishes radio communication with one or more radio terminal apparatuses, said base station apparatus comprising:

a load state detection section for detecting the state of load on a radiocommunication network during the course of exchange of data between said base station apparatus and said radio terminal apparatus; and

a modification section which dynamically modifies the maximum length of a packet at the time of transmission of a frame in accordance with the state of load detected by said load state detection section.

14. A method of controlling communication across a radiocommunication network which comprises one or more radio terminal apparatuses and a base station apparatus that establishes radio communication with the radio terminal apparatuses, wherein

said base station apparatus detects the state of load on a radiocommunication network during the course of exchange of data between said base station apparatus and said radio terminal apparatus, and dynamically changes the maximum back-off time for preventing collision between data in accordance with the thus-detected state of load.

15. A method of controlling communication across a

radiocommunication network which comprises one or more radio terminal apparatuses, and a base station apparatus that establishes radio communication with the radio terminal apparatuses, wherein

said base station apparatus detects the state of load on a radiocommunication network during the course of exchange of data between said base station apparatus and said radio terminal apparatus, determines, in accordance with the thus-detected state of load, whether to add a control frame to a frame of data to be transmitted in order to ensure the period during which a transmission path is occupied, and dynamically modifies the state of addition of the control frame.

16. A method of controlling communication across a radiocommunication network which comprises one or more radio terminal apparatuses and a base station apparatus that establishes radio communication with the radio terminal apparatuses, wherein

said base station apparatus detects the state of load on a radiocommunication network during the course of exchange of data between said base station apparatus and said radio terminal apparatus, and dynamically modifies the maximum length of a packet at the time of transmission of a frame in accordance with the thus-detected state of load.